REMARKS

Claims 1-2, 6-20, and 24-27 have been amended. Claims 1-27 remain pending in the application. Reconsideration is respectfully requested in light of the following remarks.

Section 101 Rejection:

The Office Action rejected claims 10-18 under 35 U.S.C. § 101 because the claimed invention is allegedly directed to non-statutory subject matter. Applicant respectfully traverses this rejection. However, in order to expedite prosecution, these claims have been amended to recite a non-transitory computer-readable storage medium, as suggested by the Examiner. For at least this reason, Applicant requests removal of the rejection of claims 10-18 under 35 U.S.C. § 101.

Section 103(a) Rejections:

The Examiner rejected claims 1, 2, 4, 5, 7, 9, 10, 11, 13, 14, 16, 18-20, 22, 23, 25 and 27 under 35 U.S.C. § 103(a) as being unpatentable over Patel et al. (U.S. Patent 6,865,185) (hereinafter "Patel") in view of Win et al. (U.S. Patent 6,453,353) (hereinafter "Win") and further in view of Lupu, et al. ("Use of Roles and Policies for Specifying and Managing a virtual Enterprise") (hereinafter "Lupu"), claims 3, 12 and 21 as being unpatentable over Patel, Win and Lupu and further in view of Ayyagari et al. (U.S. Publication 2001/0024434) (hereinafter "Ayyagari"), claims 6, 15 and 24 as being unpatentable over Patel, Win and Lupu in view of Zara et al. (U.S. Patent 7,206,848) (hereinafter "Zara"), claims 8, 17 and 26 as being unpatentable over Patel, Win and Lupu in view of Vange (U.S. Publication 2002/0059170). Applicant respectfully traverses this rejection for at least the following reasons.

Regarding claim 1, the cited art fails to teach or suggest *a server system receiving a request for service from a client, wherein said request includes an encoding specifying*

a current user role and a requested service and *in response to receiving the request for service... establishing a quality of service context based on the specified current user role included in said request and based on said policy data*. The Examiner admits that Patel does not disclose a server system receiving a request that includes a current user role, and relies on Win to teach this aspect of Applicant's claim. The Examiner further admits that Patel does not disclose establishing a quality of service context based on the current user role, and relies on Win and Lupu to teach this aspect of Applicant's claim.

Patel is directed to a system and method for queuing traffic in a wireless communication network. In Patel, packets for transmission include a flow identifier. The packets are assigned to one of a plurality of virtual groups that include discrete transmission resources based on a variety of parameters, including the flow identifier. Win is directed to role-based navigation of information resources (e.g., information resources stored on a protected Web server). In Win, user roles (described in Win as "job functions") are used in determining what resources a user can access, not in establishing a quality of service context. The Examiner relies on Win to disclose a request that includes a current user role. Specifically, the Examiner cites column 6, lines 44-48 and 58-65, as teaching, "user sending a request with a cookie identifying the user roles to the server." This and other passages of Win describe that when a user logs into the system (e.g., by logging into an access server using a single sign-on), the user is first authenticated (e.g., using the user's name and password), and then another module of the access server reads the user's roles (plural) from a Registry Server, encrypts them, and sends this information in a "roles cookie" to the user's browser. In other words, in Win, a roles cookie is created by the access server in response to a user login, based on information about the user's roles that is stored in the Registry Server, and then this roles cookie is sent to the user's browser. This roles cookie is not an encoding specifying a current user role, but is described as containing "a list of the user's roles" (see, e.g., column 10, line 55). There is nothing in Win that describes or implies that the roles cookie specifies which of the user's roles is a current user role. Since the roles cookie taught by Win does not specify a current user role, but contains a list of users roles, it cannot be used to establish a QoS context based on the specified current user role.

The Examiner submits that it would have been obvious to one of ordinary skill in the art to have modified Patel's service requests to include a current user role as taught by Win, stating, "Such a modification is an example of simple substitution of one known element (Win's user request that contains a role cookie) for another (Patel's user request) to obtain predictable results (Patel's system modified to directly receive user roles to identify which policies to apply to the request, see Win, column 5 <<lines 44-54>>)." The Examiner's suggested "predictable result" appears to be that extraneous (and unnecessary) information would be included in the packets transmitted by Patel, since Patel's system does not rely on user roles for any of its functionality, much less for establishing a quality of service context. Instead, Patel uses completely different types of information to determine quality of service parameters for received packets.

The Examiner admits that Patel and Win do not expressly disclose establishing a quality of service context based on the current user role, and relies on Lupu to teach this aspect of Applicant's claim. Specifically, the Examiner submits that Lupu discloses the use of the user role to establish particular QoS restraints (e.g., requirements, capabilities, contracts in terms of error rates, throughputs, delay, etc.) on the user's action, citing Lupu, page 1, paragraph 1: Introduction, and page 2, paragraph 2.1: ODP Definition of a role: "A role type… may include additional constraints on the behavior, such as policy or Quality of Service (QoS) statements". **Lupu is directed to the use of roles and policies (e.g., rights and duties associated with an organizational position) for specifying and managing a virtual enterprise, and has nothing to do with the limitations of Applicant's claim.** For example, the Examiner's citation on page 2 of Lupu does not describe the handling of a service request in a virtual enterprise, much less the use of a user role in establishing a QoS context for a request for service made in (or received by) such a virtual enterprise. Instead, the cited passage is actually a description of some of the concepts of the ODP enterprise language that can be used to define and model behavior in a virtual enterprise. In the ODP enterprise language, a "role" is a foundation concept that can be used to define the rights, responsibilities, and/or behavior of various components (objects) of a virtual enterprise. The objects are agents (actors) in the system

(human or otherwise). As noted above, a "role type" definition may include QoS statements. However, nothing in Lupu describes establishing a QoS context for a request for service in a virtual enterprise.

Lupu is not directed to establishing QoS context for a request for service, but for defining and using role types to model the behavior of agents in a virtual enterprise. It is not clear how the Examiner means to combine the references in teaching Applicant's claim. For example, the roles cookie taught by Win does not specify a current user role, but contains a list of user roles. Therefore, even if Lupu taught the use of a current user role in establishing a QoS for a request for service (which it does not) the roles cookie of Win would not specify a current user role (or role type) with which to establish a QoS context. Instead, each of the user roles listed in the roles cookie of Win would (according to Lupu) be defined using a different role type definition, and could include different QoS statements. In other words, the roles cookie of Win does not specify which of a list of user roles for a given user is the current role, and thus could not be used to map a current user role to a role type definition that includes QoS statements. Therefore, even if there were some way to combine the teachings of Patel, Win, and Lupu, their combination would not result in Applicant's claimed invention.

The Examiner submits, "It would have been obvious to one of ordinary skill in the art to have modified Patel's QoS system to include the user role functionality described above from Win and Lupu. Such a modification would have provided improvement to Patel's system because incorporating role-based QoS (as taught in Win and Lupu) provides a more flexible and extensible way to control QoS in a network [see for example Win, abstract | column 2 <<lines 26-28>>: the user role allows flexibility and extensibility in adding users to the system]." The Examiner's own citation and remarks do not support his conclusions. Win's abstract does not describe such an advantage of role-base QoS, but states, "The registry server controls a flexible, extensible, additive data model stored in a database that describes the user, the resources, roles of the user, and functional groups in the enterprise that are associated with the user." In other words, Win's abstract describes the use (and advantage to the system of Win) of a flexible,

extensible, and additive data model. The Examiner's citation in Win, column 2 states, "There is a further need for such a mechanism that is easy to configure and re-configure as new users and resources become part of the system", again referring to the additive data model of Win. The Examiner does not explain how he believes such a data model would improve the system of Patel, nor how the use of role-based QoS would "provide a more flexible and extensible way to control QoS" in the system of Patel, which does not rely on user roles in any of its functions. Applicant asserts that the stated reason to combine the references is not commensurate with the features of Patel, and that their combination would not result in Applicant's claimed invention.

When the claim is considered as a whole, the cited art clearly fails to teach or suggest *a server system receiving a request for service from a client, wherein said request includes an encoding specifying a current user role and a requested service* and *in response to receiving the request for service... establishing a quality of service context based on the specified current user role included in said request and based on said policy data*. The Examiner has failed to consider the combination of these limitations in the claim as a whole. The Examiner merely submits, in effect, that Patel teaches establishing and propagating a QoS context with a transmission packet, that Win teaches including a user role in a request for service, and Lupu teaches that QoS statements can be included in a role type definition. However, these features are not analogous to the elements of Applicant's claim that the Examiner submits they teach, and they are not combinable to teach or teach or suggest the specific features and functionality in the specific manner combined in Appellants' claim. As noted above, Patel does not teach any use of a user role in determining a QoS context. Therefore, there would be no reason to include such information in its transmission packets. In addition, the roles cookie of Win does not teach or suggest an encoding specifying a current user role. Therefore, even if it were included in a packet in Patel, Patel could not use this information (a list of user roles) to establish a QoS context for such a packet based on the current user role. In addition, there is nothing in Lupu that describes the user of a role type definition (or QoS statements thereof) to establish a QoS context for a request for service, such as the request for service recited in Applicant's claim. Therefore, even if the features of Patel,

Win, and Lupu could somehow be combined, they would not result in a system in which a server system receives a request for service from a client, and the request includes an encoding specifying a current user role and a requested service, and in response to receiving the request for service... establishing a quality of service context based on the specified current user role included in said request and based on said policy data. The combined art does not teach the combination of these limitations arranged as recited in claim 1 when the claim is considered in its entirety.

For at least the reasons stated above, Applicant asserts that the Examiner has failed to establish a *prima facie* rejection of claim 1.

Claims 10 and 19 include limitations similar to claim 1, and were rejected for similar reasons. Therefore, the arguments presented above apply with equal force to these claims, as well.

Regarding claim 6, the cited art fails to teach or suggest *propagating the same quality of service context with a subsequent sub-request of said request.* The Examiner admits that Patel as modified by Win and Lupu does not expressly disclose propagating the same quality of service content with a subsequent request, and relies on Zara to teach this aspect of Applicant's invention. Specifically, the Examiner cites column 7, lines 58-61 of Zara as disclosing attaching the same quality of service context ("tag") with a subsequent request related to the first request. Zara is directed to intelligent classification and handling of user requests in a data service system. The cited passage (and preceding text) states that when a client system generates a first request for a session or transaction, the first request does not contain a classification tag. Instead, a classification tag is generated by the application system (according to business rules stored in the application system) and is attached to the response to the first request and sent back to the client that sent the first request. The requesting client attaches the classification tag that was generated and sent with the first response to any subsequent requests for the same session or transaction. When the application system receives the subsequent requests, it reapplies

the business rules and may re-classify them and attach a different classification tag to the corresponding responses (see, e.g., FIG. 3 and its description in columns 8-9).

Applicant submits that, as described above, Zara does not describe propagating the same quality of service context with a subsequent sub-request of (an original) request. In fact, Zara does not describe the propagation of classification information from one request to another request at all, but from one response to a next request. In addition, Zara teaches that for each subsequent request, the business rules are re-evaluated, which may result in a different classification for each subsequent request. Therefore, Zara clearly does not teach or suggest the above-referenced limitations of Applicant's claim.

The Examiner submits that it would have been obvious to one of ordinary skill in the art to have modified Patel to include Zara's teachings to insure that the requests involved in the same session or transaction receive the QoS. However, as noted above, Zara does not teach that requests involved in the same session or transaction receive the same classification. Instead, in Zara: no classification is included in a first request; classifications do not propagate from one request to another request, but from one response to a next request; and since business rules are re-evaluated for each request, there is nothing to ensure that requests involved in the same session or transaction receive the same classification. Therefore, the Examiner's stated motivation to combine the references is inconsistent with the teachings of the references themselves.

For at least the reasons stated above, Applicant asserts that the Examiner has failed to establish a *prima facie* rejection of claim 6.

Claims 15 and 24 include limitations similar to claim 6, and were rejected for similar reasons. Therefore, the arguments presented above apply with equal force to these claims, as well.

Regarding claim 8, the cited art fails to teach or suggest *wherein said propagating comprises a load balancing service dispatching said request, including said quality of*

service context, to an application server in a plurality of application servers in the server system, based on said quality of service context. The Examiner admits that Patel does not expressly disclose a load balancing service that dispatches requests to an application server and relies on Vange to teach this aspect of Applicant's invention. Vange is directed to a system for load balancing between web servers in a network environment. The Examiner submits that Vange discloses a load balancing service that dispatches requests to an application server in a plurality of application servers based on a quality of service context, citing FIG. 1 of Patel, FIG. 2 of Vange, and paragraph [0094] of Vange. Applicant asserts however, that the QoS data used in load balancing in Vange is not a QoS context included in a request for service, but is data about current conditions collected using other means, such as QoS monitor 64.

The Examiner submits that it would have been obvious to one of ordinary skill in the art to have modified Patel to include Vange's load balancing capability to insure that loads are balanced equally between the servers. Applicant first asserts that Patel includes other mechanisms for metering, adaptive congestion control, and flow control that facilitate a fair and equitable distribution of packets to virtual groups and to resources allocated to those virtual groups that take into account available bandwidth, load, and QoS class (see, e.g., FIG, 15, and its description). Therefore, there would be no reason to look to Vange for another method of balancing packet distribution, nor is it clear that the load balancing of Vange would necessarily improve Patel's capability to distribute packets to virtual groups and their resources. In addition, since Vange's load balancing system does not rely on a QoS context of a particular service request, nor does it propagate such a QoS context in a service request to an application server, even if the load balancing taught by Vange were incorporated into the system of Patel, the combination would not result in Applicant's claimed invention. Instead, it would merely add a load balancing function based on monitored performance data to the system of Patel.

For at least the reasons stated above, Applicant asserts that the Examiner has failed to establish a *prima facie* rejection of claim 8.

Claims 17 and 26 include limitations similar to claim 8, and were rejected for similar reasons. Therefore, the arguments presented above apply with equal force to these claims, as well.

Applicant asserts that numerous other ones of the dependent claims recite further distinctions over the cited art. Applicant traverses the rejection of these claims for at least the reasons given above in regard to the claims from which they depend. However, since the rejections have been shown to be unsupported for the independent claims, a further discussion of the dependent claims is not necessary at this time. Applicant reserves the right to present additional arguments.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is respectfully requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5681-90800/RCK.

Respectfully submitted,

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